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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/896,367	06/28/2001	Ralph James Knotts	80310023/JAS	2225

7590

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EXAMINER

PEREZ, GUILLERMO

ART UNIT PAPER NUMBER

2834

DATE MAILED: 03/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/896,367

Applicant(s)

KNOTTS ET AL.

Examiner

Guillermo Perez

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 December 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takemura et al. (U. S. Pat. 5,880,545) in view of Lindsley (U. S. Pat. 6,137,199).

Takemura et al. disclose a spindle motor comprising:

a shaft supported from a base frame and supporting on the outer diameter thereof a stator (99) comprising:

a plurality of laminations supporting coils which are sequentially energized to cause rotation of a hub (81) supporting one or more discs for rotation in a plane axially over the stator (99),

the hub (81) supporting a magnet (95) and back iron radially adjacent the stator coils. Takemura et al. disclose that the base frame defines a well, the magnet (95) and back iron extending axially from a lower surface of the rotor and being axially below the discs so that the stator (99) and magnet (95) and back iron of the motor are all axially located below the hub (81) and the discs supported by the hub (81).

Takemura et al. do not disclose that the back iron supports a flux shield extending substantially of the entire width of the magnet and intervening between the

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magnet and the base. Takemura et al. do not disclose that the flux shield is formed of a magnetic material to capture any stray magnetic flux from the motor magnet. Takemura et al. do not disclose that the shield is integrated with the back iron. Takemura et al. do not disclose that the shield is glued to the axial end of the magnet facing the base frame.

Takemura et al. do not disclose that the shield extends the entire width of the magnet but is limited to extending the radial width of the magnet. Takemura et al. do not disclose that the flux shield is spaced from the magnet. Takemura et al. do not disclose that the means formed of a magnetic material to capture any stray magnetic flux from the motor magnet is spaced from the magnet. Takemura et al. do not disclose that the shield is comprised of steel. Takemura et al. do not disclose that the shield is comprised of mu metal. Takemura et al. do not disclose that the shield is integrated with the back on. Takemura et al. do not disclose that the shield is glued to the axial end of the magnet facing the housing.

Lindsley discloses that the back iron supports a flux shield (43) extending substantially of the entire width of the magnet (42) and intervening between the magnet (42) and the base (12). Lindsley discloses that the flux shield (43) is formed of a magnetic material to capture any stray magnetic flux from the motor magnet (42). Lindsley discloses that the shield (43) is integrated with the back iron. Lindsley discloses that the shield is glued to the axial end of the magnet facing the base frame (12).

Lindsley discloses that the shield (43) extends the entire width of the magnet (42) but is limited to extending the radial width of the magnet (42). Lindsley discloses that the flux shield (43) is spaced from the magnet (42). Lindsley discloses that the means (43) formed of a magnetic material to capture any stray magnetic flux from the motor magnet (42) is spaced from the magnet (42). Lindsley's invention has the purpose of forcing leakage and fringing fluxes back to the primary flux path of the primary magnets.

It would have been obvious at the time the invention was made to modify the motor of Takemura et al. and provide it with the shield disclosed by Lindsley for the purpose of forcing leakage and fringing fluxes back to the primary flux path of the primary magnets.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the shield and the back iron integral since it has been held that forming in one piece an article which has formerly been formed in two pieces and put together involves only routine skill in the art. *Howard v. Detroit Stove Works*, 150 U. S. 164 (1893).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the shield of mu metal or steel since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guillermo Perez whose telephone number is (703) 306-5443. The examiner can normally be reached on Monday through Thursday and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on (703) 308 1371. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305 3432 for regular communications and (703) 305 3432 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 0956.

Guillermo Perez
March 24, 2003

Thomas M. Dougherty
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